

WHAT IS CLAIMED:

Claim 1. A method for identifying an endocrine disruptor comprising the steps of:

- (a) incubating a cell line having aromatase activity with a test compound;
- (b) assaying for inhibition or activation of aromatase activity due to said test compound so as to identify an endocrine disruptor.

Claim 2. The method of Claim 1, wherein said cell line is a human cell line.

Claim 3. The method of Claim 2, wherein said cell line is a human granulosa-like tumor cell line.

Claim 4. The method of Claim 3, wherein said cell line is a human granulosa-like tumor cell line has the following characteristics:

- (a) Origin: female invasive ovarian granulosa cell carcinoma;
- (b) Doubling time: 46.4 h;
- (c) Abnormal karyotype: 45, XX, 7q-, -22 (7q deletion and monosomy 22);
- (d) Possesses aromatase activity;
- (e) Produces progesterone upon exposure to human chorionic gonadotropin (HCG); and
- (f) Expresses follicle stimulating hormone (FSH).

Claim 5. The method of Claim 4, wherein said human cell line is KGN cell line (RIKEN gene bank deposit number: RCB 1154).

Claim 6. The method of Claim 1, wherein aromatase activity is assayed using an assay

selected from the group consisting of a [ $^3\text{H}$ ]H<sub>2</sub>O release assay, an ELISA and an RIA.

Claim 7. A kit for screening for an endocrine disruptor comprising a cell line having aromatase activity, and components for assaying for inhibition or activation of aromatase activity.

Claim 8. The kit of Claim 7, wherein said cell line is a human cell line.

Claim 9. The kit of Claim 8, wherein said cell line is a human granulosa-like tumor cell line.

Claim 10. The kit of Claim 9, wherein said cell line has the following characteristics:

- (a) Origin: female invasive ovarian granulosa cell carcinoma;
- (b) Doubling time: 46.4 h;
- (c) Abnormal karyotype: 45, XX, 7q-, -22 (7q deletion and monosomy 22);
- (d) Possesses aromatase activity;
- (e) Produces progesterone upon exposure to human chorionic gonadotropin (HCG); and
- (f) Expresses follicle stimulating hormone (FSH).

Claim 11. The kit of Claim 10, wherein said cell line is KGN cell line (RIKEN gene bank deposit number: RCB 1154).

Claim 12. The kit of Claim 7, wherein assaying is selected from the group consisting of a [ $^3\text{H}$ ]H<sub>2</sub>O release assay, an ELISA and an RIA.

Claim 13. The kit of Claim 7, wherein said components for assaying for inhibition or activation of aromatase activity comprise [ $1\beta$ - $^3\text{H}$ ]androstenedione.

Claim 14. The kit of Claim 13, wherein said components for assaying for inhibition or activation of aromatase activity additionally comprise a member selected from the group consisting of db-cAMP, FSH, dexamethasone and MG.